

Project Description

I. General

THIS PROJECT INVOLVES THE MODIFICATION TO THE EXISTING TRAFFIC SIGNAL AT MD 32 MAIN STREET AND MD 27 LIBERTY STREET/RAILROAD AVENUE. THE WORK INVOLVES THE INSTALLATION OF A NEW TRAFFIC SIGNAL STRUCTURE AND SIGNAL HEADS IN ADVANCE OF THE EXISTING RAILROAD CROSSING ALONG THE SOUTHBOUND MD 27 (RAILROAD AVENUE) APPROACH. ALL EXISTING TRAFFIC SIGNAL HEADS ARE TO BE REPLACED AND RE-PAINTING OF ALL EXISTING AND NEW STRUCTURES WILL BE REQUIRED. THE EXISTING LOOP DETECTORS ARE TO BE RE-CUT AFTER THE ROADWAY OVER LAY HAS BEEN COMPLETED BY THE PRIME CONTRACTOR. THE CONTROLLER CABINET SHALL REMAIN BUT WILL REQUIRE INTERNAL TIMING MODIFICATIONS FOR THE PRE-EMPTION CLEARANCES AND WIRING FOR THE NEW ADDITIONAL SIGNAL HEADS. MD 32 IS ASSUMED TO RUN IN AN EAST/WEST DIRECTION.

Project contact persons are:

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SHA, TRAFFIC SIGNAL SHOP
PHONE: (410) 787-7650
MR. EDWARD RODENHIZER

Maintenance of Traffic:

THE FOLLOWING *TEMPORARY TRAFFIC CONTROL STANDARDS* SHALL APPLY FOR THIS PORTION OF THE PROJECT:
STANDARD NUMBERS: 104.00 THRU 104.00-30, 104.03-02, 104.31-02, 104.32-02, 104.37-02, 104.38-02
104.39-02, 104.40-02, 104.41-02, 104.81-01

Construction Notes:

- ALL VEHICLE TRAFFIC SIGNAL HEAD REPLACEMENTS SHALL TAKE PLACE DURING THE INTERSECTION ROAD CLOSURE AND TO BE COORDINATED WITH THE PRIME RAILROAD CONTRACTOR AS NOT TO INTERFERE WITH HIS WORK SCHEDULED.
- ALL NEW TRAFFIC SIGNAL HEADS SHALL BE INSTALLED PRIOR TO THE PAINTING OF STRUCTURES.
- ALL EXISTING ELECTRICAL SIGNAL WIRING AND/OR CONDUITS SHALL REMAIN OPERATIONAL UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS.
- A PLANNED WORK SCHEDULE WITH THE PRIME RAILROAD CONTRACTOR SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE INSTALLATION OF TRAFFIC SIGNAL ELECTRICAL CONDUITS BEING PLACED UNDER /NEAR THE RAILROAD TRACKS.
- THE CONTRACTOR IS NOT TO MAKE ANY CHANGE IN THE OPERATIONAL FUNCTION OF THE TRAFFIC SIGNAL PHASING AND /OR TIMING WITHOUT THE WRITTEN DIRECTION FROM THE ENGINEER.

Equipment List "A"

A. Equipment to be supplied by the Administration.

Item No.	Description	Unit	Quantity
9001	12" ONE-WAY, THREE SECTION (R,Y,G) SIGNAL HEAD WITH MAST ARM MOUNTING HARDWARE	EA	5
9002	8" ONE-WAY, FOUR SECTION (R,R,Y,G) SIGNAL WITH MAST ARM MOUNTING HARDWARE	EA	1
9003	12" ONE-WAY, FIVE SECTION (R,Y,A,Y,G,A,G) SIGNAL HEAD WITH MAST ARM MOUNTING HARDWARE	EA	3
9004	12" ONE-WAY, THREE SECTION (R,Y,G) 3M TYPE SIGNAL HEAD WITH MAST ARM MOUNTING HARDWARE	EA	2
9005	27" STEEL POLE WITH SINGLE 38" MAST ARM- (1 3/4" x 90") ANCHOR BOLTS	EA	1
9006	12" TWO-WAY, TWO SECTION PEDESTRIAN SIGNAL WITH SIDE POLE MOUNTED HARDWARE	EA	2
9007	12" TWO-WAY, TWO SECTION PEDESTRIAN SIGNAL WITH POST TOP MOUNTED HARDWARE	EA	2
9008	SHA FIELD PERSONNEL (CONTROLLER WIRING AND RE-PROGRAMMING)	LS	
9009	8 PIN 24 VOLT RELAY WITH BASE	EA	1

Equipment List "B"

B. Equipment to be furnished and/or installed by the Contractor.

Item No.	Description	Unit	Quantity
1001	MAINTENANCE OF TRAFFIC	LS	
1002	MOBILIZATION	LS	
5003	FURNISH & INSTALL 12" WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE	LF	445
5005	FURNISH & INSTALL 24" WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE	LF	173
8001	INSTALLATION OF SIGNAL HEADS	EA	15
8002	FURNISH & INSTALL ELECTRICAL CABLE 5 CONDUCTOR (NO. 14 AWG)	LF	750
8003	ADJUST EXISTING SIGNS AND HARDWARE FOR PAINTING	LS	
8004	INSTALLATION OF STEEL POLE WITH MAST ARM	EA	1
8005	FURNISH AND INSTALL HANDHOLE	EA	2
8006	REMOVE AND DISPOSE OF EXISTING MATERIAL & EQUIPMENT	LS	
8007	INSTALLATION OF MAST ARM MOUNTED SIGN	EA	1
8008	FURNISH & INSTALL 3" ELECTRICAL CONDUIT PVC SCHEDULE 40- TRENCHED	LF	270
8009	FURNISH & INSTALL 2-CONDUCTOR ALUMINUM SHIELDED CABLE (NO. 14 AWG)	LF	500
8010	FURNISH & INSTALL 1-CONDUCTOR FLEXIBLE PVC TUBING (NO. 14 AWG)	LF	1400
8011	FURNISH & INSTALL LOOP DETECTOR SAWCUT	LF	380
8012	FURNISH & INSTALL 1" GALVANIZED STEEL ELECTRICAL CONDUIT	LF	35
8013	PAINTING EXISTING STRUCTURES	LS	
8014	GROUND ROD 3/4" x 10"	EA	1
8015	FURNISH & INSTALL 1-CONDUCTOR NO. 6 AWG STRANDED BARE COPPER WIRE	LF	50
8016	CONCRETE FOUNDATION	CY	2.62
8017	USE EXISTING DISK AND AS- BUILT TRAFFIC CONTROL DEVICE	EA	1
8018	FURNISH & INSTALL ELECTRICAL CABLE 3 CONDUCTOR (#14 AWG)	LF	750
8019	FIBER-OPTIC BLANK OUT SIGN (R3-I), 30"x30" WITH MAST ARM MOUNTING HARDWARE	EA	1
8020	REMOVE AND GRIND EXISTING PAVEMENT MARKINGS	LF	30

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PHASE 1 AND 5	G	R	R	R	R	R	R	FLY	FLY	R	R	DW	DW	DW	DW	DW	DW	DW	DW	DW
1 AND 5 CHANGE	PHASE 1 AND 5 MAY CHANGE TO PHASE 1 AND 6 OR PHASE 2 AND 5																			
PHASE 1 AND 6	G	R	G	R	R	R	R	FLY	FLY	R	R	DW	DW	DW	DW	DW	DW	DW	DW	DW
6 CHANGE	Y	G	G	R	R	R	R	FLY	FLY	R	R	DW	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 5	R	R	R	G	G	R	R	FLY	FLY	R	R	DW	DW	DW	DW	DW	DW	DW	DW	DW
2 AND 5 CHANGE	R	R	R	G	G	R	R	FLY	FLY	R	R	DW	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 AND 6	G	G	G	G	G	R	R	FLY	FLY	R	R	WK	WK	WK	WK	DW	DW	DW	DW	DW
PED. CLEARANCE	G	G	G	G	G	R	R	FLY	FLY	R	R	FLDW	FLDW	FLDW	FLDW	DW	DW	DW	DW	DW
2 AND 6 CHANGE	Y	Y	Y	Y	Y	R	R	FLY	FLY	R	R	DW	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 7	R	R	R	R	R	G	G	FLY	FLY	R	R	DW	DW	DW	DW	DW	DW	DW	DW	DW
4 AND 7 CHANGE	R	R	R	R	R	G	G	FLY	FLY	R	R	DW	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 AND 8	R	R	R	R	R	G	G	FLY	FLY	G	G	DW	DW	DW	DW	WK	WK	WK	WK	WK
PED. CLEARANCE	R	R	R	R	R	G	G	FLY	FLY	G	G	DW	DW	DW	DW	FLDW	FLDW	FLDW	FLDW	FLDW
4 AND 8 CHANGE	R	R	R	R	R	Y	Y	FLY	FLY	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FLR	FLR	FLR	FLR	FLR	FLR	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK
PRE - EMPTION	R	R	R	R	R	R	R	Y	Y	G	G	DW	DW	DW	DW	DW	DW	DW	DW	DW
TRACK CLEARANCE	R	R	R	R	R	R	R	R	R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW	DW
TRACK DWELL	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW	DW
PRE - EMPTION * CHANGE	R	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW	DW

* THE CONTROLLER SHALL RETURN TO PHASE 2 AND 6 GREEN AT THE END OF PRE - EMPTION PHASE.

WIRING KEY

- A-C = LOOP WIRE (TO BE SPICED TO EXISTING 2 CONDUCTOR ALUMINUM SHIELDED CABLE.)
D = 5 CONDUCTOR (NO. 14 AWG)
E = 1 CONDUCTOR (NO. 6 AWG) STANDARDS BARE COPPER WIRE
F = 3 CONDUCTOR (NO. 14 AWG)
NOTE: ALL OTHER EXISTING ELECTRICAL CABLES SHALL REMAIN IN SERVICE



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

MD 32 (MAIN ST.) & MD 27 (RAILROAD AVE./LIBERTY ST.)

GENERAL INFORMATION

AAR/DOT NO. 831697V

DRAWN BY: A.P.
CHECK BY: S.R.
SCALE: NONE

F.A.P. NO. STP-237-1(10)E
S.H.A. NO. CL 796BD1
COUNTY CARROLL

PLAN SHEET NO.: TS-1112D-G1
SHEET NO. 2 OF 2



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